



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,033	07/21/2003	James R. Richter	4438.75802	5119
24978	7590	05/01/2007		
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			EXAMINER PRICE, CRAIG JAMES	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ed

Office Action Summary	Application No. 10/624,033	Applicant(s) RICHTER, JAMES R.	
	Examiner Craig Price	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-22 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-22 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/21/2003 and 5/18/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/10/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/10/2007 has been entered.

Information Disclosure Statement

2. All references listed were in a previously submitted disclosure statement and already of record.

Claim Objections

3. Claim 16 objected to because of the following informalities: line 3, "pump connecting" should be -- pump connector --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,6-8,12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nichols (4,420,016).

Nichols discloses a fluid flow stabilizer (see figure 3) "for use in a flow of fluid in a conduit between a turbulence creating device and a fluid control device" (intended use limitation), comprising, a fluid conduit section having a first end "for mounting the first end to the fluid conduit" (intended use limitation) and a second end "for mounting the second end to the fluid conduit, the fluid conduit section having a length" (intended use limitation), an internal diameter, and a fluid passage therethrough to allow the fluid to flow from the first end to the second end, a flow straightening device positioned in the fluid conduit section, wherein at least a portion of the flow straightening device has a diameter less than the internal diameter of the fluid conduit section, and further wherein the flow straightening device comprises one or more longitudinally extending vanes, wherein at least portions (25) of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, the fluid conduit section being constructed of a flexible material to absorb at least one of shock, vibration and mis-alignment in the conduit and further wherein the flow straightening device comprises at least four vanes, with each vane (27) arranged perpendicular to adjacent vanes, and wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween as shown in figures 3 and 5. The claimed limitations: "for use" and "for mounting", are considered as intended use limitations. A recitation of the intended use of the claimed invention must result in a structural difference between

Art Unit: 3753

the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claims 7 and 8, the limitations "wherein the turbulence creating device and the mounting arrangement at the first end is configured to mount directly to an outlet of the pump, and wherein the fluid control device comprises a valve and the mounting arrangement at the second end is configured to mount directly to an inlet of the valve", are considered as further limiting the intended use limitation in claim 6.

Regarding claim 12, Nichols discloses that the vanes are contained entirely within the length of the fluid conduit (Col.1, Lns. 6-8).

Regarding claim 13, Nichols discloses that the vanes have a hydrodynamic shape including at least one curve see figure 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols '016. Examiner takes official notice that the conduits made from an elastomeric material, such as typical commercial outdoor water hoses, are old and well known in the art, for reasons that are old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the well known device

Art Unit: 3753

made from elastomeric material into the device of Nichols, in order to flex around objects during operation.

7. Claims 1,3-10,12-22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suchdev (6,619,331) in view of Nichols (4,420,016).

Regarding claims 3,5,6,9,16,18 and 27, Suchdev discloses a fluid conduit section having a first end "for mounting the first end to the fluid conduit" (intended use limitation) and a second end "for mounting the second end to the fluid conduit, the fluid conduit section having a length" (intended use limitation), an internal diameter, and a fluid passage therethrough to allow the fluid to flow from the first end to the second end, the fluid conduit section being constructed of a flexible material (66 – corrugated metal pipe, 76 – flexible metal braid, made in a similar construction as applicant's see figure 5) to absorb at least one of shock, vibration and mis-alignment in the conduit, and wherein the length of the conduit section is less than five times the internal diameter (see figure 7c, 76 and 66 has a length to diameter ratio which meets this limitation). The claimed limitations: "for use" and "for mounting", are considered as intended use limitations. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 7, Suchdev discloses that the turbulence creating device (78) and the mounting arrangement (92) at the first end is configured to mount directly to an outlet of the pump as shown in figure 7c.

Regarding claim 8, Suchdev discloses that the fluid control device (20 the engine) comprises a valve (there valve is actually inherent to the system, there must be a valve within the engine) and the mounting arrangement at the second end (94 is configured to meet the limitation) is configured to mount directly to an inlet of the valve as shown in figure 4 and 4A.

Regarding claim 14, Suchdev discloses that at least one of the first mounting arrangement and the second mounting arrangement comprises a flange with a series of spaced bolt holes extending therethrough as shown in figure 4.

Regarding claim 19, Suchdev discloses that the pump connector comprises an elastomeric material (Col.7, Lns. 24-27, the groove 144 contains an oring).

Suchdev is silent as to having a flow straightening device positioned in the fluid conduit section, wherein at least a portion of the flow straightening device has a diameter less than the internal diameter of the fluid conduit section, and further wherein the flow straightening device comprises one or more longitudinally extending vanes, wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, and further wherein the flow straightening device comprises at least four vanes, with each vane arranged perpendicular to adjacent vanes, and wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, wherein the vanes have a hydrodynamic shape including at least one curve and wherein the vanes are contained entirely within the length of the fluid conduit.

Nichols discloses a conduit which teaches the use of a conduit having a flow straightening device positioned in the fluid conduit section, wherein at least a portion of the flow straightening device has a diameter less than the internal diameter of the fluid conduit section, and further wherein the flow straightening device comprises one or more longitudinally extending vanes, wherein at least portions (25) of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, and further wherein the flow straightening device comprises at least four vanes, with each vane (27) arranged perpendicular to adjacent vanes, and wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, wherein the vanes have a hydrodynamic shape including at least one curve, as shown in figures 3 and 5 and wherein the vanes are contained entirely within the length of the fluid conduit (Col. 1, Lns. 6-8), and the vanes have a hydrodynamic shape including at least one curve (see figure 3).

It would have been obvious to one of ordinary skill in the art at the time of invention to employ the device of Nichols into the conduit of Suchdev to have a flow straightening device positioned in the fluid conduit section, wherein at least a portion of the flow straightening device has a diameter less than the internal diameter of the fluid conduit section, and further wherein the flow straightening device comprises one or more longitudinally extending vanes, wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, and further wherein the flow straightening device

Art Unit: 3753

comprises at least four vanes, with each vane arranged perpendicular to adjacent vanes, and wherein at least portions of radially outer edges of the vanes are separated from the internal diameter of the fluid conduit section, such that a space is defined therebetween, wherein the vanes have a hydrodynamic shape including at least one curve and wherein the vanes are contained entirely within the length of the fluid conduit in order to prevent kinking of the hose (Col.1, Lns. 6-8).

Furthermore, Regarding claims 4 and 10, Examiner takes official notice that the conduits made from an elastomeric material, such as typical commercial outdoor water hoses, are old and well known in the art, for reasons that are old and well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the well known device made from elastomeric material into the device of Nichols, in order to flex around objects during operation.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 8AM - 5PM Monday -Thursday, increased flex time.

Art Unit: 3753

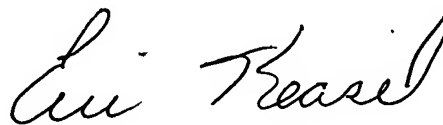
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP



30 April 2007



ERIC KEASEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700